

# Project 2: Speech recognition

Urszula Białończyk, Olaf Werner

18.05.2021

# Outline

1 Introduction

2 LSTMs

3 CNNs

# Project description

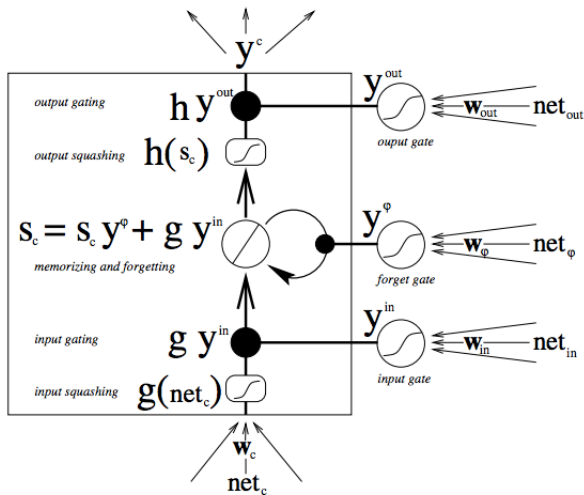
The aim of the second project was to explore different techniques of building deep neural networks for speech recognition.

The dataset used for the experiments was a part of TensorFlow Speech Recognition Challenge.

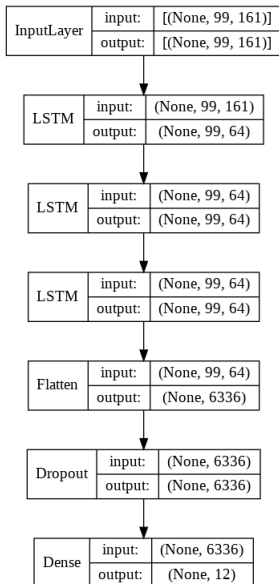
We trained different models using TensorFlow.

All of the models were trained using both the 'base' training set and the preprocessed background noises.

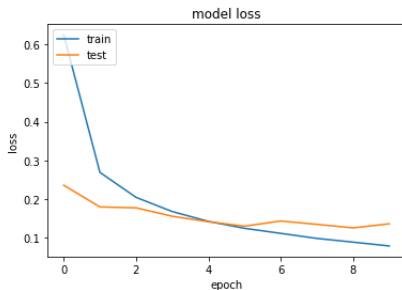
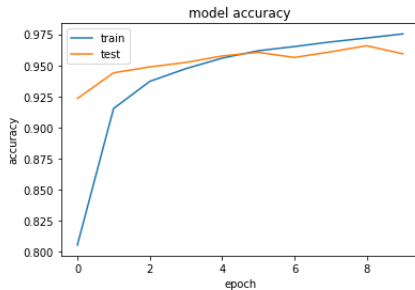
# LSTM unit



# Our Architecture



# Our Training



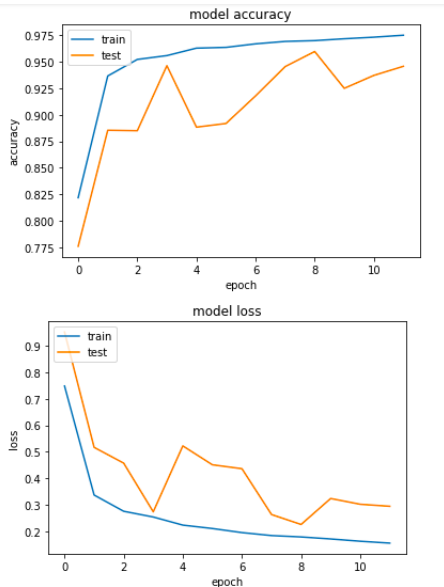
# Our Results

Name	Submitted	Wait time	Execution time	Score
results(2).csv	14 hours ago	1 seconds	1 seconds	0.74396

Complete

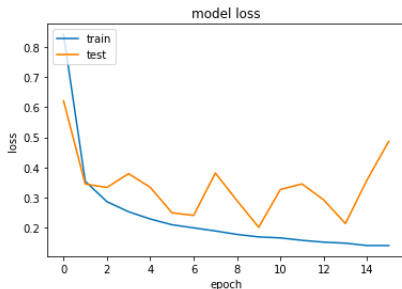
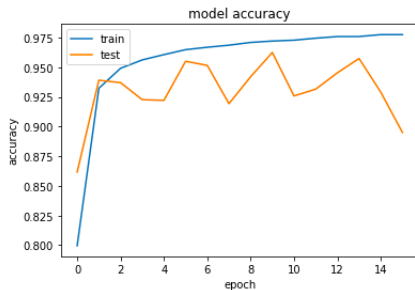
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# ResNet: 1 layer without data augmentation

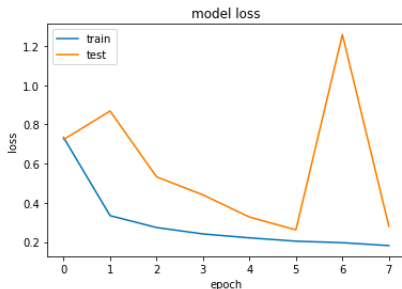
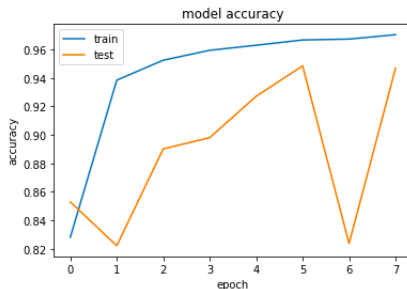




# ResNet: 2 layers without data augmentation

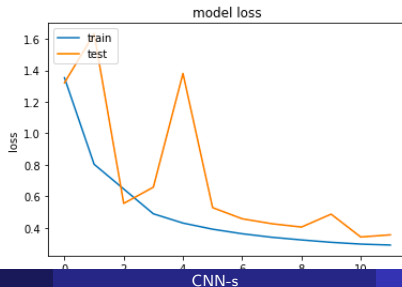
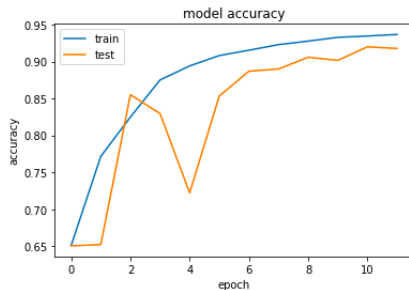


# ResNet: 3 layers without data augmentation



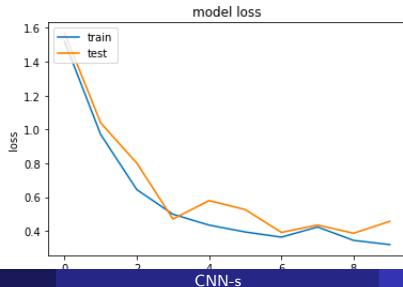
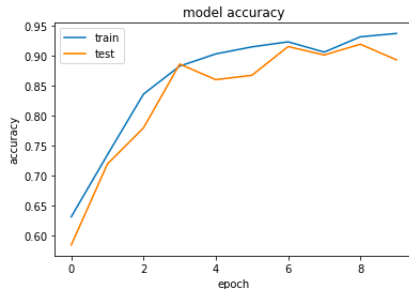
# ResNet: 2 layers with data augmentation

Random height and width shifts.



# ResNet: 3 layers with data augmentation

Random height and width shifts.



The score for the ensemble of 1-,2- and 3-layer ResNets without data augmentation.

Name	Submitted	Wait time	Execution time	Score
wyniki_komitet.csv	just now	1 seconds	1 seconds	0.76260

Complete